

Appendix C

Modeling Input File

(See original modeling report)

9.0 Compliance Certification Plan

9.1 Objective

In order to document continuous compliance pursuant to the Clean Air Act Amendments, this section contains the facility monitoring, recordkeeping, and reporting provisions required for major stationary sources. This plan will establish compliance with all applicable state and federal rules and regulations, with the exception of non-applicable rules and regulations as listed in the permit application section 4.0 on regulatory applicability. Included in this section will be compliance with Section 112(r) Accidental Release Prevention regulations, if applicable, and NSPS requirements for the boilers.

This section will cover the permit requirements of the Tier II Operating Permit number 011-00013 and the appropriate compliance demonstration methods.

Idaho Supreme certifies that its facility in Firth is in compliance with the identified applicable requirements of the Federal and State Clean Air Acts. Furthermore, Idaho Supreme will continue to comply with all applicable regulatory requirements. Compliance certifications during the permit term will be submitted annually or more frequently if required by the underlying applicable requirement or by the IDEQ.

9.2 Compliance Demonstration with Facility Wide Requirements

In order to demonstrate compliance with the facility wide conditions of the Tier II Operating Permit 011-00013, Idaho Supreme will monitor and record with each condition as follows:

9.2.1 Fugitive Particulate Matter - IDAPA 58.01.01.650-651

Permit Condition 2.1 states that all reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

9.2.1.1 Compliance Monitoring

Permit Condition 2.2 states that the permittee is required to monitor and maintain records of the frequency and the methods used by the facility to reasonably control fugitive particulate emissions. IDAPA 58.01.01.651 gives some examples of ways to reasonably control fugitive emissions which include using water or chemicals, applying dust suppressants, using control equipment, covering trucks, paving roads or parking areas, and removing materials from streets.

9.2.1.2 Recordkeeping

Permit Condition 2.3 requires that the permittee maintain a record of all fugitive dust complaints received. In addition, the permittee is required to take appropriate corrective action as expeditiously as practicable after a valid complaint is received. The permittee is also required to maintain records that include the date that each complaint was received and a description of the

complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

9.2.2 Control of Odors - IDAPA 58.01.01.775-776

Permit Condition 2.4 and IDAPA 58.01.01.776 both state that: *"No person shall allow, suffer, cause or permit the emission of odorous gases, liquids or solids to the atmosphere in such quantities as to cause air pollution."* This condition is currently considered federally enforceable until such time it is removed from the SIP, at which time it will be a state-only enforceable requirement.

9.2.2.1 Compliance Demonstration

Permit Condition 2.5 requires the permittee to maintain records of all odor complaints received. If the complaint has merit, the permittee is required to take appropriate corrective action as expeditiously as practicable. The records are required to contain the date that each complaint was received and a description of the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Permit Condition 2.5 requires the permittee to take corrective action as expeditiously as practicable. In general, DEQ believes that taking corrective action within 24 hours of receiving a valid odor complaint meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

9.2.3 Visible Emissions

IDAPA 58.01.01.625 and Permit Condition 2.6 state that *"(No) person shall discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than twenty percent (20%) opacity as determined . . ."* by IDAPA 58.01.01.625. This provision does not apply when the presence of uncombined water, NO_x, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this rule.

Idaho Supreme performed a visible emissions performance test on March 17, 2003, and demonstrated compliance.

9.2.3.1 Compliance Monitoring

Idaho Supreme will conduct routine visible emissions inspections of the facility to ensure reasonable compliance with the visible emissions rule. Idaho Supreme will inspect potential sources of visible emissions during daylight hours and under normal operating conditions.

If opacity is determined to be greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, Idaho Supreme will take corrective action and report the exceedance in its annual compliance certification and in accordance with the excess emissions rules in IDAPA 58.01.01.130-136.

9.2.3.2 Recordkeeping

Idaho Supreme will maintain records of the results of each visible emissions inspection and each opacity test when conducted. These records will include the date of each inspection, a description of the assessment of the conditions existing at the time visible emissions are present, any corrective action taken in response to the visible emissions, and the date corrective action was taken.

9.2.4 Excess Emissions

Permit Condition 2.7 requires that the permittee comply with the requirements of IDAPA 58.01.01.130-136 for startup, shutdown, scheduled maintenance, safety measures, upset, and breakdowns. This section is fairly self-explanatory. Idaho Supreme notes the following:

Subsections 133.02, 133.03, 134.04, and 134.05 are not specifically included in the Tier II permit as applicable requirements. These provisions of the *Rules* only apply if the permittee anticipates requesting consideration under subsection 131.02 of the *Rules* to allow DEQ to determine if an enforcement action to impose penalties is warranted. Section 131.01 states "... *The owner or operator of a facility or emissions unit generating excess emissions shall comply with Sections 131, 132, 133.01, 134.01, 134.02, 134.03, 135, and 136, as applicable. If the owner or operator anticipates requesting consideration under Subsection 131.02, then the owner or operator shall also comply with the applicable provisions of Subsections 133.02, 133.03, 134.04, and 134.05.*" Failure to prepare or file procedures pursuant to sections 133.02 and 134.04 is not a violation of the *Rules* in and of itself, as stated in subsections 133.03.a and 134.06.b. Therefore, since the permittee has the option to follow the procedures in subsections 133.02, 133.03, 134.04, and 134.05; and is not compelled to, the subsections are not considered applicable requirements for the purpose of this permit and are not included as such.

9.2.5 Open Burning

All open burning will be done in accordance with IDAPA 58.01.01.600-616.

9.3 Compliance Demonstration with Specific Emission Units

This section covers boiler #4, boiler #3, dryers and other natural gas burning equipment, and process dehydration lines.

9.3.1 Boiler No. 4

Section 3 of Tier II Operating Permit 011-00013 has monitoring and recordkeeping requirements for PM/PM-10, SO₂, NO_x, fuel combustion, and opacity. Idaho Supreme has conducted required opacity performance testing and is completing its NO_x performance testing. A test protocol was approved from IDEQ on February 3, 2003. The test protocol is included in the appendix of this application.

The following requirements are included in the Tier II Operating Permit 001-00013:

- Boiler #4, PM/PM₁₀:
 - Sections 3.2: When combusting, PM emissions shall not cause opacity to exceed 20%, six-minute average, except for one six-minute period per hour of not more than 27% opacity. The standard applies at all times except during periods of startup, shutdown or malfunction. (40 CFR 60.43b(f) and (g))
 - Section 3.5: Method 9 is used to determine opacity for *initial* performance testing (40 CFR 60.46b(d)(7)). An opacity meter must be installed for continuous monitoring. (40 CFR 60.48b(a)).
- Boiler #4, NOx
 - Section 3.4: When combusting natural gas or distillate oil, NOx shall not exceed 0.10 lb/MMBTU (low heat release) and 0.20 lb/MMBTU (high heat release). (40 CFR 60.44b(a)).
 - Section 3.4: When combusting residual oil, NOx shall not exceed 0.30 lb/MMBTU (low heat release) and 0.40 lb/MMBTU (high heat release). (40 CFR 60.44b(a)).
 - Section 3.4: Emission limits must be met at all times and compliance is determined on a 30-day rolling average.
 - Section 3.7: Compliance can be determined through the use of a 30-day performance test (40 CFR 60.44b(h)).

9.3.1.1 Monitoring

PM/PM-10

Idaho Supreme has performed the initial Method 9 performance test on March 17, 2003 with residual fuel, and has demonstrated compliance. The continuous opacity monitor has been installed and is operating. The monitor has demonstrated compliance with opacity at all times.

NOx

The NOx continuous monitor has been operating for a 30-day performance test period; details of the NOx monitoring is discussed in the protocol in the Appendix. Idaho Supreme is in the process of analyzing NOx data.

Fuel Consumption

Section 3.9 requires Idaho Supreme to measure and record daily fuel consumption.

9.3.1.2 Recordkeeping

Residual Oil Nitrogen Content

Section 3.8: Idaho Supreme must record the nitrogen content in residual fuel and calculate the average nitrogen content on a quarterly basis (40 CFR 60.49b(e)).

Fuel Consumption

Section 3.9 requires Idaho Supreme to record the amount of fuel combusted during each day and calculate the annual capacity factor individually for all fuels burned during each calendar quarter in accordance with 40 CFR 60.49b(d). The annual capacity factor is determined on a 12-month rolling average basis.

Opacity

Opacity records will be kept on site for the most recent 2-year period in accordance with 40 CFR 60.49b(d). Idaho Supreme is in compliance with this requirement.

Fuel Receipts for Very Low Sulfur Fuel

Section 3.6 requires Idaho Supreme to keep fuel receipts to certify the use of very low sulfur fuel (40 CFR 60.42b(j)(2)). Idaho Supreme is in compliance with this requirement. Idaho Supreme may choose an alternative method for verifying very low sulfur fuel in accordance with 40 CFR 60.45b.

NO_x

After the initial 30-day performance test, Idaho Supreme will collect NO_x data and use it to prepare for any excess emissions report.

9.3.2 Boiler No. 3

Boiler #3 does not require any performance testing. Boiler #3 is a Cleaver Brooks, Model WT200X-BR3. The source is applicable under NSPS Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. It is permitted to be fired on natural gas, propane, diesel or residual fuel, but will run on natural gas or propane only. Section 4.8 of Permit number 011-0013 requires Method 9 opacity performance testing under 40 CFR 60.43c(c) when oil is burned; and an opacity CEMS must be installed when burning residual oil. However, because natural gas or propane only will be burned, no opacity performance testing will be done and an opacity CEMS will not be installed. In addition, because oil is not being combusted, compliance demonstration is not required for verifying very low sulfur fuel in section 4.6 and for particulate matter in section 4.5 of the Tier II permit.

9.3.2.1 Monitoring

Fuel Consumption

Idaho Supreme is in compliance with section 4.4 of the Tier II permit, where the hours of operation of Boiler no. 3 must be recorded.

9.3.2.2 Recordkeeping

Fuel Combustion

Idaho Supreme is recording the amount of fuel used daily for Boiler no. 3 as required in section 4.10.

9.3.3 Dryers and Other Natural Gas Equipment

Idaho Supreme is in compliance with the following monitoring and recordkeeping requirements of section 5.7 of the Tier II permit.

- Number of hours each industrial space heater is operated on a 12-month period.
- Average hourly amount on a daily basis for natural gas and LPG consumption for the fluidized bed dryer, dryers A, B and C, secondary dryer, and space heaters.

9.3.4 Process Dehydration Lines

Idaho Supreme is in compliance with section 6.4 of the Tier II permit, where the daily and consecutive 12-month period and the daily aggregate throughput of the storage silos are recorded to verify compliance with section 6.3 of the permit.

9.4 Compliance Demonstration with Other Federal Requirements

9.4.1 Compliance Assurance Monitoring (CAM)

Idaho Supreme is not required to submit a CAM plan. That is because none of the emission units uses a control device to achieve compliance with any such emission limitation or standard.

9.4.2 Renovation/Demolition – 40 CFR 61, Subpart M (Asbestos)

Idaho Supreme will comply with all applicable portions of 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

9.4.3 Chemical Accident Prevention Provisions – 40 CFR 68

Any facility that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, must comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR 68 no later than the latest of the following dates:

- Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130, or
- The date on which a regulated substance is first present above a threshold quantity in a process.

Idaho Supreme does not currently possess chemicals above a threshold quality at this time. In the future if the facility becomes subject to this rule it will comply with the provisions in a timely manner.

9.4.4 Maximum Achievable Control Technology (MACT)

Idaho Supreme is not affected by any subparts of CFR 63, Maximum Achievable Control Technology (MACT) standards by the EPA.

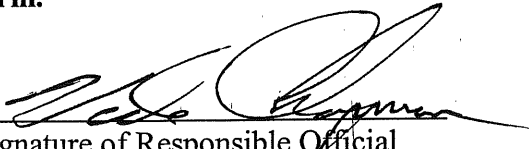
9.5 New Applicable Requirements

Idaho Supreme is not aware of any new applicable requirements that will become effective during the operating permit term. However, should new requirements become applicable during the term of the permit, then Idaho Supreme will comply with the new requirements and use the appropriate test methods.

9.6 Certification

I certify this compliance plan and that the stationary source will comply in a timely manner with any new applicable requirements that become effective during the operating permit term.

X



Signature of Responsible Official

The following have been identified as insignificant activities with no quantifiable emissions, as defined in IDAPA 58.01.01.317. The Emission Point numbering identification is kept the same as that originally submitted by Idaho Supreme in its first Tier II Operating Permit application.

Emission Point No.	Description
1	Heating and A/C unit for office
2	Heating and A/C unit for office
3	Heating and A/C unit for office
4	Woman's bathroom sewer pipe vent
5	Main sewer pipe vent
6	Men's bathroom vent-air
7	Woman's bathroom vent-air
8	Men's bathroom sewer pipe vent
9	QC sink sewer pipe vent
10	QC lunchroom sink vent
11	QC area ventilation
12	Receiving area vent
13	Receiving area vent
14	Receiving area vent
15	Receiving area heater exhaust- discharge out wall
16	Steam quench tank exhaust
17	Peel and trim area vent fan
18	A & B line peeler
19	Peel and trim area ventilation fan
20	Fan above transformer in maintenance area
21	Fan, upper electrical vault, white water
22	Maintenance area fan
23	Maintenance heater exhaust
24	Maintenance heater exhaust
25	Cleaning baghouse vent (packaging)
26	Pulsaire discharge fan
27	Cooker
28	Cooker
29	Cooker
30	Cooker
31	Snifter tube
32	Snifter tube
33	Snifter tube
34	Snifter tube
35	Snifter tube

Idaho Supreme Potatoes, Inc.
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Emission Point No.	Description	
44	Snifter tube	
37	Snifter tube	
46	Snifter tube	
52	Flash tank steam release	01.a.77
53	Old DA tank steam release	01.a.77
55	Hole	
56	Hole	
57	New DA tank steam release	
58	Hole	
59	Hole	
60	Boiler blowdown tank vent	01.a.80
61	#1 boiler steam relief	01.a.77
62	#2 boiler steam relief	"
63	#3 boiler steam relief	"
64	Atmospheric bleed-stm header to atmosphere	"
65	#3 boiler steam relief	"
66	#3 boiler steam relief	"
67	#4 boiler steam relief	"
no #	Economizer water relief vent	
68	#4 boiler steam relief	01.a.77
69	#4 boiler steam relief	01.a.77
70	Compressor room ventilation discharge	
71	P6 Upper bagging baghouse discharge vent	
72	Bagging area ventilation fan	
73	Cooker	
74	Cooker	
75	Cooker	
76	Cooker	
77	Snifter tube	
78	Snifter tube	
83	Snifter tube	
84	Snifter tube	
85	Compressor room ventilation fan	
86	Compressor room opening	
88	Dryer gas diaphragm atmospheric vent	
89	Dryer gas diaphragm atmospheric vent	
92	Dryer room ventilation fan	
93	Dryer room ventilation fan	
94	Secondary dryer gas diaphragm atmospheric vent	
95	WTP heater exhaust	
96	WTP vacuum pump discharge	
97	WTP sewer vent	
unnumbered discharge points		
Tank 4	1,000 gallon propane tank	

Emission Point No.	Description
Tank 6	10,000 gallon diesel tank (TANKS output included with this application)
Tank 7	5,000 gallon day tank
	Truck shop area heater

11.0 Alternative Operating Scenario/Trading Scenarios/Permit Shield

11.1 Alternative Operating Scenario/Trading Scenarios

Idaho Supreme does not propose alternative operating scenarios or trading scenarios. It should be noted that operation of Boiler no. 4 using natural gas, propane, diesel, or residual fuel is considered normal operations.

11.2 Permit Shield

Idaho Supreme requests application of the permit shield to the operating permit issued from this application. Compliance with the conditions of the permit shall deem the facility compliant with all applicable requirements as of the date of permit issuance.

Idaho Supreme also requests that the applicability determinations of this document be made part of the operating permit. Idaho Supreme understands that incorporation of the applicability determinations is necessary to ensure full protection under the permit shield.

Appendix A – Completeness Checklist

Prepared for:

Air Quality Permitted Facilities

By:

Idaho Division of Environmental Quality
Air Quality Permitting Bureau
Operating Permits Section

AIR QUALITY OPERATING PERMIT APPLICATION CHECKLIST

COMPLETENESS DETERMINATION CHECKLIST AND APPLICATION INDEX

Company Name Idaho Supreme Potatoes Inc.

Location Firth, Idaho

Project Tier I Operating Permit Application

Reviewer Tod Sanders

Date: April 25, 2003

The attached forms have been provided as a checklist and application index to ensure all the required information have been included with the air pollution source permit application. These forms shall be submitted along with the application. These checklist/index forms include the following elements of the permit application:

- X Application Forms
- X Source Descriptions
- X Source Flow Diagrams
- X Plot Plans
- X Emission Estimate References and Documentation
- X Excess Emission Documentation
- X Ambient Air Impact Analysis
- X Compliance Certification Plan

Each page of the permit application shall be numbered so that each page can be referenced individually. This will allow these checklist forms to act as the permit application table of contents.

SECTION SOURCE PAGE

[illegible]

_ Is the application signed and dated? y
 _ Are all the forms adequately completed? y

SOURCE DESCRIPTIONS

SOURCE PAGE

Process Description Section 3—See Table of Contents for page number

YES NO

- ☐ Are the existing facilities described? y
- ☐ Are the modifications or new facilities described? y
- ☐ Are all applicable processes, materials, ventilation, and controls described? y
- ☐ Are all equipment referenced by specific ID name or number? y

SOURCE	PAGE
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Potato Slice Processing -- See Figure 3-2 and Table of Contents for page number

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

YES NO

- Are included? y
- Shows entire existing facility? y
- Shows entire future facility? NA
- Shows each process separately (if needed)? y
- Details storage, roads, transfers, and processing? y
- Labeling is adequate (processes and stacks identified, flowrates, and process rates shown)? y

PLOT PLANS

SOURCE **PAGE**

Facility Location See Figure 2-1 and Table of Contents for page number.

Location Map See Figure 8-1 and Table of Contents for page number.

Site Map See Figure 8-2 and Table of Contents for page number.

_____	_____
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_____	_____
_____	_____

YES NO

- ☐ Is included? y
- ☐ Shows location coordinates? y
- ☐ Shows plant boundaries? y
- ☐ Shows neighboring ownership and facilities? y
- ☐ Shows topography? y
- ☐ Scale shown or distances adequately labeled? y
- ☐ Shows all buildings, equipment, storage, and roads? y
- ☐ Is adequate for both existing and future or includes both? y

SOURCE	PAGE
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This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

- _ All fugitive and point sources listed? Yes - see forms
- _ All pollutants addressed? y
- _ Process documentation and specs included? Yes – see application forms
- _ Control equipment documentation and specs included? _Yes-see forms
- _ Emission factors documented and referenced? y
- _ Calculations and assumptions shown? y
- _ Source tests referenced (test includes processing and control device test conditions)? y

EXCESS EMISSION DOCUMENTATION

SOURCE **PAGE**

Excess Emission Documentation – See Section 7 and Table of Contents for page number.

_____	_____
_____	_____
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_____	_____
_____	_____

YES NO

- ☐ All three types of excess emissions (startup, shutdown, and scheduled maintenance) covered for each source? NA
- ☐ Calculations and documentation included? NA
- ☐ Expected frequencies of excess emissions noted? NA
- ☐ Justification for amounts and frequencies of excess emissions? NA
- ☐ Procedures for minimizing excess emissions covered? NA

AMBIENT AIR IMPACT ANALYSIS

PROJECT	PAGE
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See Section 8 and Table of Contents for page number.

Existing ambient air quality discussion including attainment status and classification of areas which may be significantly impacted. y
Discussion of dispersion model use and assumptions. y
Dispersion model input. y
Dispersion model output. y
Discussion of ambient impacts for each pollutant. y
Discussion of how excessive impacts will be controlled or avoided for sources and pollutants with the potential for these. NA

COMPLIANCE CERTIFICATION PLAN
SOURCE PAGE

Compliance Certification Plan – See Section 9 and Table of Contents for page number

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. On the right side, there is a vertical margin line, creating a narrow right margin. The paper appears to be from a notebook or a standard ruled sheet.

YES NO

- Monitoring, recordkeeping, and reporting discussed? y
- Stack testing methods thoroughly documented? y
- Discussion and documentation of process control mechanisms used to meet emission limits? y
- Quality assurance/quality control discussed? y
- Monitoring equipment specifications and documentation included? y

Appendix B – Performance Test and Monitoring Protocol

SOURCE TEST PROTOCOL

EPA Method 9 and NOx Continuous Emissions Monitoring System and Initial Source Tests

Idaho Supreme
PO Box 246
Firth, Idaho 83236-0246

Boiler #4
State of Idaho Tier II Number 011-00013

Prepared for: Jan Nel
Physical Facilities Manager
P.O. Box 246
Firth, Idaho 83236-0246

Prepared by: JBR Environmental Consultants, Inc.
6443 N. Hillsboro Place
Boise, ID 83703
208.853.0883

January 24, 2003

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1.0 INTRODUCTION

This source test protocol describes methods that will be used to perform opacity observations and NOx emissions monitoring by JBR Environmental Consultant, Inc., on behalf of Idaho Supreme.

Test Program Organization

Facility Office:	Idaho Supreme
Address:	PO Box 246 Firth, Idaho 83236-0246
Contact:	Jan Nel
Phone:	208.346.4100 ext. 115
Permit #:	011-00013
Consultant:	JBR Environmental Consultants, Inc.
Address:	6443 N. Hillsboro Place Boise, Idaho 83703
Contact:	Daniel P. Heiser, P.E.
Phone:	208.853.0883
State Authority:	Idaho Department of Environmental Quality
Address:	Pocatello Regional Office 444 Hospital Way, #300 Pocatello, ID 83201
Contact:	Larry Sims
Phone:	208. 236.6160
Proposed Test Date:	February 2003

2.0 EMISSION SOURCE INFORMATION

2.1 FACILITY DESCRIPTION

The emission unit to be tested is boiler #4 with a 140 MMBTU/hr capacity. The boiler provides process heat for a potato dehydration processing facility located in Firth, Idaho.

2.2 EMISSION UNIT INFORMATION

Boiler #4 is a Bigelow / Coen 200 Series FYR with a CSI NOx Miser Size 34 Burner. It is permitted to be fired on natural gas, propane, diesel or residual fuel. Permit number 011-00013, section 3.5, requires Method 9 opacity performance testing for residual fuel. A continuous opacity monitoring system (COMS) must also be installed. Section 3.7 requires performance testing for NOx emissions through the use of a 30-day performance test, if requested. Idaho Supreme hereby requests to determine compliance through this method. The source is applicable under New Source Performance Standards (NSPS) Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

Boiler #3 will not undergo any performance testing. Boiler #3 is a Cleaver Brooks, Model WT200X-BR3. The source is applicable under NSPS Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. It is permitted to be fired on natural gas, propane, diesel or residual fuel, but will run on natural gas or propane only. Section 4.8 of Permit number 011-0013 requires Method 9 opacity performance testing under 40 CFR 60.43c(c) when oil is burned; and an opacity CEMS must be installed when burning residual oil. However, because natural gas or propane only will be burned, no opacity performance testing will be done and an opacity CEMS will not be installed.

2.3 EMISSION LIMITATIONS FOR PERFORMANCE TESTING

Idaho Department of Environmental Quality (IDEQ) Tier II Permit 011-00013 has the following limits relevant to performance testing requirements:

- Boiler #4, PM/PM₁₀:
 - Sections 3.2: When combustng, PM emissions shall not cause opacity to exceed 20%, six-minute average, except for one six-minute period per hour of not more than 27% opacity. The standard applies at all times except during periods of startup, shutdown or malfunction. (40 CFR 60.43b(f) and (g))
 - Section 3.5: Method 9 is used to determine opacity for *initial* performance testing (40 CFR 60.46b(d)(7)). An opacity meter must be installed for continuous monitoring. (40 CFR 60.48b(a)).

- Boiler #4, NO_x
 - Section 3.4: When combusting natural gas or distillate oil, NO_x shall not exceed 0.10 lb/MMBTU (low heat release) and 0.20 lb/MMBTU (high heat release). (40 CFR 60.44b(a)).
 - Section 3.4: When combusting residual oil, NO_x shall not exceed 0.30 lb/MMBTU (low heat release) and 0.40 lb/MMBTU (high heat release). (40 CFR 60.44b(a)).
 - Section 3.4: Emission limits must be met at all times and compliance is determined on a 30-day rolling average.
 - Section 3.7: Compliance can be determined through the use of a 30-day performance test (40 CFR 60.44b(h)).
- Facilitywide
 - Section 2.6: The visible emissions standard requires that a person shall not discharge any air pollutant into the atmosphere from any point of emission for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than twenty percent (20%). (IDAPA 58.01.01.625.)

3.0 SOURCE TEST PROGRAM DESCRIPTION

3.1 PERFORMANCE TESTING CONSULTANT AND CEMS/COMS MANUFACTURERS

JBR will provide a certified opacity reader for initial opacity testing. JBR is providing the protocol for NO_x performance testing and the opacity meter in sections below. Idaho Supreme will operate the NO_x and opacity CEMS. JBR will assist with data reduction and preparation of a report for Idaho Supreme to submit to IDEQ. JBR will assist with quality control review.

The COMS manufacturer is Sick/Maihak model OMD41. The NO_x CEMS manufacturer is Sick/Maihak model GM31.

3.2 TEST DATES

The scheduled test date for Method 9 opacity reading is during February 2003. The 30-day NO_x performance testing will begin in February 2003. IDEQ and EPA will be notified well in advance of any changes in these dates.

3.3 REPORT DATE

Idaho Supreme will submit two copies of the source test report to the Idaho DEQ within 30 days following completion of the last test result, i.e., after the 30-day performance test for NO_x testing has ended.

3.4 POLLUTANTS TO BE TESTED

The following pollutants will be tested, as close as possible to the maximum residual oil consumption rate of 650 gal/hr or the maximum natural gas consumption rate of 136,000 standard cubic feet per hour.

- PM via Opacity, Initial Performance Testing Boiler #4, Residual Oil—Initial performance testing opacity observations will be determined according to Method 9, Title 40 CFR 60, Appendix A and using procedures contained in Idaho DEQ's *"Procedures Manual for Air Pollution Control"* in accordance with IDAPA 58.01.01.625.
- PM via Opacity, Continuous Opacity Monitor, Boiler # 4, Any Fuel—An opacity meter will be installed and operated in accordance with EPA Performance Specification 1 and Appendix F, Quality Assurance Procedures. In accordance with 40 CFR 60.13(c), a performance evaluation of the COMS will be completed.
- NOx, Continuous Emissions Monitor System (CEMS)—Under section 3.7 of the Tier II Operating Permit # 011-00013, Idaho Supreme requests to demonstrate compliance through the use of a 30-day performance test. Under 40 CFR 60.46b(e)(1), the 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. During periods when performance tests are not requested, NOx data that will be collected will be used for excess emission reports, but not for determining compliance with the standards. Both performance testing and continuous monitoring for NOx will be completed in accordance with Performance Specification 2, 40 CFR 60.13, 40 CFR 60.48b, and Appendix F, Quality Assurance Procedures. As required under 40 CFR 60.13(b), the NOx CEMS will be operational prior to the performance testing and verification of the manufacturer's recommendations for installation, operation and calibration will be provided upon request.
- PM via Method 22 – Method 22 will be performed during the date of the Method 9 reading.

3.5 TESTING METHODOLOGY, PROCEDURES, AND PERFORMANCE SPECIFICATIONS

3.5.1 OPACITY

3.5.1.1 Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources

For the initial performance test, Method 9 opacity observations are performed by an observer certified in the method. A 60-minute opacity observation test will be performed for the stack discharges of Boiler #4, which must operate with residual fuel.

3.5.1.2 Method 22, Visual Determination of Fugitive Emissions from Material Sources and

Smoke Emissions from Flares

At the date of the initial Method 9 performance test, a Method 22 test will be performed by a certified observer to meet the requirements of section 2.6 of the permit. A position will be selected that enables a clear view of the potential emission point(s) of the affected facility, as appropriate. A position at least 4.6 m (15 feet), but not more than 400 m (0.25 miles), from the emission source is recommended. We will select a position where the sunlight is not shining directly in the observer's eyes. We will not observe emissions continuously for a period of more than 15 to 20 minutes without taking a rest break. For sources requiring observation periods of greater than 20 minutes, the observer shall take a break of not less than 5 minutes and not more than 10 minutes after every 15 to 20 minutes of observation.

3.5.1.3 40 CFR 60.13, Monitoring Requirements, Boiler #4

The zero and upscale calibration drifts will be checked at least daily and will be adjusted whenever the 24-hour zero or upscale calibration value drift exceeds two times the limits of the applicable performance specification. Optical surfaces exposed to effluent gases will be cleaned prior to adjustments, unless an automatic zero adjustment is installed, in which case the surface is cleaned when the cumulative automatic zero compensation exceeds 4% opacity. Opacity will be calibrated initially at zero opacity and a known upscale value. Sampling and analyzing will occur each successive 10-second period and data recording each successive 6-minute period.

Data will be reduced to 6-minute averages, calculated from 36 or more data points equally spaced over each 6-minute period. Data recorded during periods of continuous system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data averages.

3.5.1.4 Performance Specification 1 (PS1), Specifications and Test Procedures for Continuous Opacity Monitoring Systems (COMS) in Stationary Sources (Boiler #4)

Idaho Supreme will perform according to PS1 when installing and operating the COMS. Highlights of the COMS installation and operation and PS1 are noted below:

- Location of meter (approval requested):
The opacity monitor will be installed at a location where the opacity measurements are representative of the total emissions from the boiler. This will be accomplished by choosing a measurement location and a light beam path as follows:

- Measurement Location.² Section 8.1(2)(iii) of PS1 allows for the selection of alternative locations for opacity measurement, to the satisfaction of the Administrator or delegated agent. Idaho Supreme has selected a location 2 diameters downstream of a flow disturbance. Idaho Supreme believes that the average opacity measured at this alternative location is equivalent to the opacity as measured at a location meeting the criteria of sections 8.1(2)(i) and 8.1(2)(ii). The opacity meter manufacturer, Sick Maihak, asserts that an opacity meter installed 2 diameters downstream from an elbow is acceptable.
- Light Beam Path. Idaho Supreme will select a light beam path that passes through the centroidal area of the stack or duct. Also, the following additional requirements or modifications for these measurement locations will be met:

If your measurement location is in a:	And is:	Then use a light beam path that is:
Straight vertical section.	Less than 4 equivalent diameters downstream from a bend.	In the plane defined by the upstream bend (see figure 1-1 of PS1).
Straight vertical section of stack or duct.	Less than 4 equivalent diameters upstream from a bend.	In the plane defined by the downstream bend (see figure 1-2 of PS1).
Straight vertical section of stack or duct.	Less than 4 equivalent diameters downstream and is also less than 1 diameter upstream from a bend.	In the plane defined by the upstream bend (see figure 1-3 of PS1).

- Specifications of ASTM D 6216-98, including a suitable data recorder or automated data acquisition handling system, are met. A certificate of conformance from the opacity monitor manufacturer is enclosed. This opacity meter has met all manufacturer specifications of PS1.
- Idaho Supreme will use an Allen Bradley PLC to capture a reading every 10 seconds.
 - 1 reading will be recorded every 6 minutes
 - Every 24 hours data will be dumped to a hard copy and then the data will be replaced. Hard copy records will be kept on site.
- Attenuators (*i.e.*, neutral density filters) are used to check the daily calibration drift and calibration error of a COMS. Attenuators are designated as either primary or secondary based on how they are calibrated.
- Field Audit Performance Tests, in accordance with PS1, will be performed.

² According to PS1 sections 8.1(2)(i) and 8.1(2)(ii), Idaho Supreme had the option to select a measurement location that is (1) at least 4 duct diameters downstream from all particulate control equipment or flow disturbance, (2) at least 2 duct diameters upstream of a flow disturbance, (3) where condensed water vapor is not present, and (4) accessible in order to permit maintenance. However, an alternative location was determined to be more appropriate.

- A 168 hour test period will be performed with the boiler operating under normal conditions and will include routine shutdowns, if applicable. No unscheduled maintenance, repair, or adjustment to the COMS will be performed. The zero calibration drift (CD) test and the upscale calibration drift test will be performed.
- If there is a breakdown in the COMS, there is no specified procedure for corrective action by the facility (Idaho Supreme). However, in the case of a breakdown, Idaho Supreme will repair the COMS as quickly as possible. Idaho Supreme will document the time period of the breakdown and notify IDEQ. Idaho Supreme will perform and record one official Method 9 reading a day until the opacity meter is operating again.

3.5.1.5 Appendix F to Part 60 – Quality Assurance Procedures (Boiler #4)

- Quality Control (QC) Requirements: Many QC requirements have been addressed in the discussion above on PS1. Idaho Supreme will develop a QC document, which will be kept on site. Idaho Supreme's QC program will include procedures and operations for each of the following activities:
 1. Calibration of COMS.
 2. CD determination and adjustment of COMS.
 3. Preventive maintenance of COMS (including spare parts inventory).
 4. Data recording, calculations, and reporting.
 5. Accuracy audit procedures including sampling and analysis methods.
 6. Program of corrective action for malfunctioning COMS.
- Relative Accuracy Test Audit (RATA). A RATA is not required for COMS, as there is no relative accuracy (RA) test procedures outlined in PS1.

3.5.2 NOx (BOILER #4)

3.5.2.1 40 CFR 60.13, Monitoring Requirements

The zero and span calibration drifts will be checked at least daily and will be adjusted whenever the 24-hour zero or span drift exceeds two times the limits of the applicable performance specification. A minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period will be completed. Data will be reduced to 1-hour averages. The 1-hour averages will be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data averages.

In summary, Idaho Supreme will record data every 15 minutes and will record the average every hour.

a) 40 CFR 60.48b, Emission Monitoring for Particulate Matter and Nitrogen Oxides

- The NO_x CEMS will be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.
- When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, Idaho Supreme has the option to collect emission data by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.
 - Idaho Supreme proposes an optional method here. We propose to record the fuel consumption every hour and to measure the nitrogen content in every fuel load or every 8,000 gallons to verify that the nitrogen content is less than 0.15%, as noted in the Idaho Supreme permit application.
- The 1-hour average nitrogen oxides emission rates measured by the CEMS will be expressed in lb/million Btu heat input. At least 2 data points must be used to calculate each 1-hour average.
- For Boiler #4, the upscale value for the NO_x CEMS is 500 ppm.

b) Performance Specification 2 – Specifications and Test Procedures for SO₂ and NO_x Continuous Emission Monitoring Systems in Stationary Sources

- Installation and Measurement Location Specifications. The CEMS will be installed at an accessible location where the pollutant concentration or emission rate measurements are directly representative or can be corrected so as to be representative of the total emissions from the affected facility or at the measurement location cross section. Representative measurement points or paths for monitoring in locations that the CEMS will pass the Relative Accuracy (RA) test will then be selected. The measurement location is intended to be (1) at least two equivalent diameters downstream from the nearest control device, the point of pollutant generation, or other point at which a change in the pollutant concentration or emission rate may occur and (2) at least a half equivalent diameter upstream from the effluent exhaust or control device. The measurement point is intended to be (1) no less than 1.0 meter (3.3 ft) from the stack or duct wall or (2) within or centrally located over the centroidal area of the stack or duct cross section. The effective measurement path is intended to (1) be totally within the inner area bounded by a line 1.0 meter (3.3 ft) from the stack or duct wall, or (2) have at least 70 percent of the path within the inner 50 percent of the stack or duct cross-sectional area, or (3) be centrally located over any part of the centroidal area.
- Reference Method Measurement Location and Traverse Points. These will be selected in accordance with PS2 Section 8.1.3.

- Calibration Drift (CD) Test Procedure. While the affected facility is operating at more than 50 percent of normal load, or as specified in an applicable subpart, we will determine the magnitude of the CD once each day (at 24-hour intervals) for 7 consecutive days according to the procedure given in Sections 8.3.2 through 8.3.4 of PS2.
- Relative Accuracy Test Procedure. We will conduct the RA test according to the procedure given in Sections 8.4.2 through 8.4.6 of PS2 while the boiler is operating at more than 50 percent of normal load. The RA test may be conducted during the CD test period. Method 7 is the reference method for NO_x. Correlation of RM and CEMS data will be conducted according to Section 8.4.5 of PS2.
- Calculations and Data Analysis will be performed according to Section 12.0 of PS2. Results will be summarized in a format such as the following:

Figure Appendix B - 1 Relative Accuracy Determination

Run No.	Date and Time	^a NO _x		
		RM (Method 7)	CEMS	Diff
		ppm ^b		
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
Average				
Accuracy				

^a Average of three samples

^a Make sure that RM and CEMS data are on a consistent basis, either wet or dry.

- Calibration Drift Performance Specification. The CEMS calibration must not drift or deviate from the reference value of the gas cylinder, gas cell, or optical filter by more than 2.5 percent of the span (up scale) value of 500 ppm.
- Relative Accuracy Performance Specification. The RA of the CEMS must be no greater than 20 percent when is used in the denominator of PS2 Eq. 2-6 (average emissions during test are greater than 50 percent of the emission standard) or 10 percent when the applicable emission standard is used in the denominator of PS2 Eq. 2-6 (average emissions during test are less than 50 percent of the emission standard).

a) **Appendix F to Part 60 – Quality Assurance Procedures**

- Quality Control (QC) Requirements: Idaho Supreme will develop a QC document which will be kept on site. Idaho Supreme's QC program includes procedures and operations for each of the following activities:
 1. Calibration of CEMS.
 2. CD determination and adjustment of CEMS.
 3. Preventive maintenance of CEMS (including spare parts inventory).
 4. Data recording, calculations, and reporting.
 5. Accuracy audit procedures including sampling and analysis methods.
 6. Program of corrective action for malfunctioning CEMS.
- Calibration Drift (CD) means the difference in the CEMS output readings from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place.
- CD Assessment. As described in 40 CFR 60.13(d), Idaho Supreme must check, record, and quantify the CD at two concentration values at least once daily (approximately 24 hours) in accordance with the method prescribed by the manufacturer. The CEMS calibration must, as minimum, be adjusted whenever the daily zero (or low-level) CD or the daily high-level CD exceeds two times the limits of PS1. If the CEMS is out-of-control as defined in Section 4.3 of Appendix F to Part 60, Idaho Supreme will take necessary corrective action. Following corrective action, Idaho Supreme will repeat the CD checks.
- Data Recording and Reporting. As required in section 40 CFR 60.7(d), all measurements from the CEMS must be retained on file by the source owner for at least 2 years.
- Relative Accuracy Test Audit (RATA). The RATA must be conducted at least once every four calendar quarters. Idaho Supreme will conduct the RATA as described for the RA test procedure in PS2. In addition, Idaho Supreme will analyze the appropriate performance audit samples received from EPA as described in the applicable sampling methods.
- Cylinder Gas Audit (CGA). If required by IDEQ, Idaho Supreme will conduct a CGA in three of four calendar quarters, but in no more than three quarters in succession. To conduct a CGA, Idaho Supreme will: (1) Challenge the CEMS (both pollutant and diluent portions of the CEMS, if applicable) with an audit gas of known concentration at two points within the following ranges:

Audit point	Audit Range
	Pollution monitors
1	20 to 30% of span (or up scale) value.
2	50 to 60% of span (or up scale) value.

Idaho Supreme will challenge the CEMS three times at each audit point, and use the average of the three responses in determining accuracy. Idaho Supreme will use separate audit gas cylinder for audit points 1 and 2. The audit cylinder gas will not be diluted when challenging the CEMS. The monitor should be challenged at each audit point for a sufficient period of time to assure adsorption-desorption of the CEMS sample transport surfaces has stabilized.

- Relative Accuracy Audit (RAA). The RAA may be conducted three of four calendar quarters, but in no more than three quarters in succession. To conduct a RAA, Idaho Supreme will follow the procedure described in PS2 for the relative accuracy test, except that only three sets of measurement data are required. Analyses of EPA performance audit samples are also required. The relative difference between the mean of the RM values and the mean of the CEMS responses will be used to assess the accuracy of the CEMS.
- Criteria for Excessive Audit Inaccuracy. Unless specified otherwise in the applicable subpart, the criteria for excessive inaccuracy are:
 - (1) For the RATA, the allowable RA in PS2.
 - (2) For the CGA, ± 15 percent of the average audit value or ± 5 ppm, whichever is greater.
 - (3) For the RAA, ± 15 percent of the three run average or ± 7.5 percent of the applicable standard, whichever is greater.
- Whenever excessive inaccuracies occur for two consecutive quarters, Idaho Supreme will revise the QC procedures or modify or replace the CEMS.
- Calculation for CEMS Data Accuracy
 - RATA RA Calculation. See PS2. The RATA will be calculated in terms of applicable emissions units.
 - RAA Accuracy Calculation. Use Equation 1-1 to calculate the accuracy for the RAA. The RAA must be calculated in units of the applicable emission standard.
 - CGA Accuracy Calculation. Use Equation 1-1 to calculate the accuracy for the CGA, which is calculated in units of the appropriate concentration. Each component of the CEMS must meet the acceptable accuracy requirement.

$$A = \frac{C_m - C_a}{C_a} \times 100 \quad \text{Eq.1-1}$$

where:

A = Accuracy of the CEMS, percent.

C_m = Average CEMS response during audit in units of applicable standard or appropriate concentration.

C_a = Average audit value (CGA certified value or three-run average for RAA) in units of applicable standard or appropriate concentration.

- Reporting Requirements

Idaho Supreme will report annually to EPA and IDEQ the drift and accuracy information as a Data Assessment Report (DAR), and include one copy of this DAR for each quarterly audit with the report of emissions required under the applicable subparts of this part.

As a minimum, the DAR will contain the following information:

1. Source owner or operator name and address.
2. Identification and location of monitors in the CEMS.
3. Manufacturer and model number of each monitor in the CEMS.
4. Assessment of CEMS data accuracy and date of assessment as determined by a RATA, RAA, or CGA.
5. Results from EPA performance audit samples and the applicable RM's.
6. Summary of all corrective actions taken when CEMS was determined out-of-control, as described in Sections 4 and 5.

An example of a DAR format is shown below in Figure 2 at the end of this document.

3.6 SAFETY CONSIDERATIONS AND WORKING CONDITIONS

Test team personnel shall adhere to facility safety requirements. The testing team will have the following safety equipment at hand:

1. Full length pants, shirt, and/or coveralls
2. Hard hat
3. Eye protection
4. Hearing protection
5. Work gloves

3.7 PRODUCTION DATA

JBR shall obtain all necessary boiler fuel consumption information for the initial performance test. Idaho Supreme will monitor the plant production rate in gallons per hour for residual fuel or cubic feet per hour for natural gas. The plant will be operated at or near its maximum operating

rate of 650 gallons per hour residual oil or 136,319 standard cubic feet per hour natural gas for Boiler #4.

4.0 Initial Performance Test Report Format

For opacity using Method 9, the test report will conform to the format shown in Figure 1.1 of the Idaho DEQ's "*Procedure Manual for Air Pollution Control*". Method 22 results will be submitted in the format of Figure 22-2 of Method 22. NOx emission results will be presented as average hourly results for the 30 days tested, in units of lb/MMBTU. The report will include relevant fuel consumption information.

Figure Appendix B-2: Example Format for Data Assessment Report

Period ending date

Year

Company name

Plant name

Source unit no.

CEMS manufacturer

Model no.

CEMS serial no.

CEMS type (e.g., in situ)

CEMS sampling location (e.g., control device outlet)

CEMS span values as per the applicable regulation: _____ (e.g., ppm, NO_x _____ ppm).

I. Accuracy assessment results (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.) If the quarterly audit results show the CEMS to be out-of-control, report the results of both the quarterly audit and the audit following corrective action showing the CEMS to be operating properly.

A. Relative accuracy test audit (RATA) for _____ (e.g., NO_x in lb/MMBTU).

1. Date of audit _____.
2. Reference methods (RM's) used _____ (e.g., Method 7).
3. Average RM value _____ (e.g., ng/J, mg/dsm³, or percent volume).
4. Average CEMS value _____.
5. Absolute value of mean difference [d] _____.
6. Confidence coefficient [CC] _____.
7. Percent relative accuracy (RA) _____ percent.
8. EPA performance audit results:
 - a. Audit lot number (1) _____ (2) _____
 - b. Audit sample number (1) _____ (2) _____
 - c. Results (mg/dsm³) (1) _____ (2) _____
 - d. Actual value (mg/dsm³)* (1) _____ (2) _____
 - e. Relative error* (1) _____ (2) _____

B. Cylinder gas audit (CGA) for _____ (e.g., NO_x in ppm).

Audit point	Audit point
1	2

1. Date of audit.....
2. Cylinder ID number.....
3. Date of certification.....
4. Type of certification..... (e.g., EPA Protocol 1 or CRM).

5. Certified audit value..... (e.g., ppm).
 6. CEMS response value..... (e.g., ppm).
 7. Accuracy..... percent.
-

C. Relative accuracy audit (RAA) for ____ (e.g., NO_x in lb/MMBTU).

1. Date of audit ____.
2. Reference methods (RM's) used ____ (e.g., Method 7).
3. Average RM value ____ (e.g., ng/J).
4. Average CEMS value ____.
5. Accuracy ____ percent.
6. EPA performance audit results:
 - a. Audit lot number (1) ____ (2) ____
 - b. Audit sample number (1) ____ (2) ____
 - c. Results (mg/dsm³) (1) ____ (2) ____
 - d. Actual value (mg/dsm³) *(1) ____ (2) ____
 - e. Relative error* (1) ____ (2) ____

* To be completed by the Agency.

D. Corrective action for excessive inaccuracy.

1. Out-of-control periods.
 - a. Date(s) ____.
 - b. Number of days ____.
2. Corrective action taken
 3. Results of audit following corrective action. (Use format of A, B, or C above, as applicable.)

II. Calibration drift assessment.

A. Out-of-control periods.

1. Date(s) ____.
2. Number of days ____.

B. Corrective action taken